TECHNOLOGY DEPT.

First Copy

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

Vol. 14. No. 1828 — Entered as second-class matter Aug. 27, 1925, Post Office, N. Y., N. Y. Under Act of March 3, 1879 — NEW YORK, TUESDAY, OCTOBER 4, 1932 — 5 Cents. $12 Per Year.

Empire State Dealers Gather at Niagara Falls For Annual Convention

Early Arrivals Indicate Good Attendance, With First Session Opening This Afternoon

Niagara Falls, N. Y., Oct. 3.—Honeymooners who flock to this resort seeking seclusion are rather out of luck tonight as the advance guard of the Empire State Automobile Merchants Association began tumbling into town for their annual convention, which opens at the Hotel Niagara tomorrow morning.

A goodly number of delegates already are on hand and reservations indicate that the registrations will be considerably swelled in the morning. In these days when cabbages count more than kings, the old practice of coming to the convention a week ahead and remaining a week after its close is passe. For that reason it is difficult to estimate closely the number of visitors who will be present at the noon luncheon tomorrow which marks the first real get-together, but it is expected that registrations will run in the neighborhood of 400 to 500.

The registrations desk has been set up in the ballroom and will be open between the hours of 10 a. m. and 12 noon. The selection of the ballroom for this function was wise in that it permits those who come to register room in which to meet old friends and also to make new ones.

Luncheon will be served at noon, and the first session of the convention will open at 1 p. m. This meeting will be called to order by W. H. Kellogg, president of the Niagara Falls Automobile Dealers' Association, which is acting as host to the convention. Mr. Kellogg is also secretary of the Empire State Automobile Merchants' Association and will welcome the delegates to Niagara Falls. Joseph Haas, president of the state body, will respond to Mr. Kellogg's address of welcome.

Paul Hoffman, president of the Studebaker Sales Corporation, is scehduled to make the first address, but has not yet announced the topic upon which he will talk. He will be followed by E. W. Turner, sales promotion chief of the Buffalo branch of the Ford Motor Company. Mr. Turner will speak on "Constructive Sales Promotion."

An analysis of motor vehicle legislation and what such legislation means to the dealer will be given

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A. P. I. PLANS WORKING MEETING IN TEXAS

New York, Oct. 3.—Forty working committees of the American Petroleum Institute have been assigned rooms in the Rice Hotel for meetings on Saturday, November 12, and Monday, November 14, in preparation for the annual sessions of the institute in Houston, November 15, 16 and 17.

Members of these committees have been grappling with practical problems of producing, refining and distributing the products of petroleum since last November, and in the meetings preliminary to the annual assembly of the whole institute will discuss reports that are to be submitted.

Typical committee topics are such subjects as waste in all three divisions of the industry, fire prevention, corrosion of equipment, car

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JERSEY TAKES LEAD FOR UNIFORM TRAFFIC CODE IN THREE STATES

Trenton, N. J., Oct. 3.—An attempt to bring about an agreement on essential principles to govern motor traffic so there may be uniformity in regulations in New Jersey, New York and Connecticut is the purpose of a series of conferences being arranged by chambers of commerce with the motor vehicle commissioners of the three states.

It has been decided to hold the first of such joint conferences in New York during the latter part of October, it was announced here by George S. Burgess, secretary of the New Jersey State Chamber of Commerce. Charles A. Harnet, New York State Motor Vehicle Commisisoner; Robbins B. Stoeckel, Connecticut Commissioner, and Harold G. Hoffman, New Jersey Commissioner, have signified their intention of participating in the mettings.

"Discussions will pertain to questions of enforcement and to changes in existing laws that may be desirable to improve conditions," Mr. Burgess said. He added that he hoped the conferences would develop a definite program, legislative or otherwise, that would cause common acceptance of practices and

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YOUNGSTOWN STEEL PLANTS LOOK TO CAR MAKERS FOR GAINS

Youngstown, Oct. 3.—Hopes that steel plants in the Youngstown manufacturing area can continue September's upturn in mill operations through October again rest with the automobile steel manufacturers, some of whom are expected to take steel in fair quantities this month.

Momentarily the upswing in steel output in the Youngstown section has halted, valley trade authorities reporting that production is ranging from 19 to 20 per cent. of capacity, unchanged from last week, but approximately double the rate at which district steel plants were working in the first week of September.

Sentiment that some sort of recovery in steel buying and production will be seen this fall before the usual decline in December continues to encourage the trade, but orders for such a gain still are lacking. The next week is expected to show definitely what can be expected from leading steel outlets, particularly the automobile industry, during the remainder of the year.

One automobile steel plant in this district will continue operating

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Key City September Sales Give Bonafide Reason for Optimism

San Antonio New Car and Truck Sales Top August; Other Centers Show Only Seasonal Declines

New York, Oct. 3.—Considerable encouragement is to be had from the early key city sales reports for September received by Automotive Daily News today. In the city of San Antonio, Tex., there was an actual increase in sales of both new cars and trucks during September, as compared with August and in Cook County, Illinois, and Cleveland, O., the decline was approximately seasonal.

San Antonio reports total new car sales for September at 235 units. This compares with 225 units in August. New commercial car sales in September reached a total of nine as compared with eight in August. During the past month used car sales in San Antonio totaled 546, as against 572 in August and 736 in September last year.

In addition to this encouraging news the Automotive Daily News correspondent in San Antonio states: "A material increase in sales is expected in October with the opening of a new bank releasing more than a million deposits. Dealers report more cash sales and more short-term sales. Buick has had a good month in September, with the outlook for October much improved. The decrease in used cars sold and the purchase of higher priced automobiles is considered a good sign."

Herbert Buckman, general manager of the Cleveland Automobile Manufacturers and Dealers Association, reports new car sales for the month of September at 853 units. This compares with 1,069 units in August and 1,714 in September last year. Used car sales for September totaled 5,886 units, as against 7,676 units in August and 6,780 in September last year.

The trend to higher priced cars is also noticeable in Cook county, Illinois, where the Automotive Daily News correspondent states:

"Franklin, La Salle, Lincoln and Pierce-Arrow among the higher priced makes, and De Soto and Essex in the lower priced brackets scored increases to Cook county registrations during September over a year ago, ranging from one to twenty units, according to an an-

(Continued on Page 2)

STUDEBAKER-ROCKNE EXPORTS UP 136% IN SEPT.; 10½% FOR '32

South Bend, Ind., Oct. 3.—September exports of Studebaker and Rockne cars exceeded exports last September by the largest percentage registered for any month this year over the corresponding month of 1931, Arvid L. Frank, vice-president and general manager of the Studebaker Pierce-Arrow Export Corporation, announced here today.

"Our passenger car exports for the month exceeded September, 1931, by 136 per cent., he stated, "and our total car shipments for nine months show a gain of 10½ per cent. over the corresponding period last year. We consider this an extremely favorable showing in view of the loss in exports of over 50 per cent. suffered by the industry as a whole for the same period.

"In addition to showing a marked improvement over 1931, our September business was 56 per cent. ahead of August this year. It also

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HUDSON-ESSEX HOLDS SALES GAIN SEVENTH WEEK IN SUCCESSION

Detroit, Oct. 3.—In spite of the normal seasonal decline Hudson-Essex weekly sales figures continue their lead over the corresponding weeks of 1931.

The sales curve crossed that of last year on August 13, and for the seven successive weeks since that period have been materially above the 1931 figures.

The gain for the week ended September 24 was 18.7 per cent. This figure includes 1932 models only and is for the United States and Canada.

ILLINOIS TRUCK SALES IN SEPTEMBER 246 ABOVE AUGUST

Chicago, Oct. 3.—Commercial car sales in Illinois during September showed an increase of 246 units over the total for August this year, according to complete returns furnished today by the Robinson Service. Passenger car sales on the other hand showed a decline of 1,182 units from the preceding month and were better than 3,000 off from September last year.

This decrease in passenger car sales is only seasonal as the September decline from August last year was at approximately the same percentage rate. The actual figure for September this year was 4,327 units, as compared with 5,509 units in August. The figures last year were 10,404 units in August, against 7,579 in September.

Commercial car registrations for September this year totaled 767 units, as against 521 units in August and 1,120 in September last year. This represents an actual gain for the month and is a reversal of trend in past normal years.

Another heartening indication is the reports for Cook County, which

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S. A. E. PRODUCTION MEETING HEARS INTERESTING PAPERS

Buffalo, N. Y., Oct. 3.—The production meeting of the Society of Automotive Engineers opened in the Hotel Statler here this morning with a good sized gathering of engineers in attendance. The technical program included a number of papers of unusual interest to the production division of the industry. The technical session got under way in the ball room at 10 o'clock, with F. A. Cornell of the Electro Devices Corporation in the chair.

Alex. Taub, design engineer of the Chevrolet organization, read a paper, presented elsewhere in this issue, giving the engineer's point of view of design and equipment for the automotive plant. L. F. Maurer read a paper on manufacturing equipment, and R. D. Prosser read a paper on present day applications of cemented carbide tooling, illustrated with a film.

C. R. Maxon of the New Jersey Zinc Company presented a paper on special zinc alloys in die castings, illustrating his talk with slides.

Luncheon was served to the members and at 12.30 technical sessions were resumed. K. H. Condit of McGraw Hill spoke on adjusting equipment to conditions.

Eight Months New Car Registrations

First tabulations of new passenger car registrations for the first eight months of 1932 by makes and states, with comparative figures for the same period last year appear on pages six and seven of this issue.

ROCKNE AUGUST SALES INCREASE 10% OVER JULY; IN 8TH PLACE

Detroit, Mich., Oct. 3.—Despite a decrease of more than 10 per cent. in total registrations of all makes of automobiles for August, as compared with July, Rockne Motors Corporation not only showed a gain, but also moved from eleventh up to eighth position in the sales standing of all makes, F. L. Wiethoff, Rockne sales manager, reported today.

Wiethoff said that Rockne has shipped more than 21,000 cars to date.

"The Rockne showing in individual states and cities is also in line with our national showing in August. In many key cities we stand in third, fourth, fifth and sixth place, while in 21 of the 48 states in August Rockne showed registration gains over July ranging from 20 per cent. to more than 200 per cent. in some instances," he added.

Key Cities Sales Hold Firm During September

(Continued from Page 1)

alysis of official figures made today.

"The total registrations for the county were considerably below September, 1931, but only 735 cars less than in August of this year. In other words, they reflected only a seasonal decline.

"September registrations for Cook county totaled 2,255 cars as compared with 3,884 in the same month last year and 2,990 for August of this year. About the same comparison held throughout the state, the Illinois registrations for last month being 4,325 cars, as against 7,597 for September, 1931, and 5,509 for August this year."

RETAIL NEW CAR FINANCING GAINS DURING AUGUST

Washington, Oct. 3. — Retail financing on both new and used cars and trucks during August showed an increase in volume over July, while the actual number of units financed declined, according to the preliminary report of the Bureau of Census of the Department of Commerce today. The total volume for the month rose to $45,058,078 in August from $44,716,709 in July, while the number of units financed dropped from 132,467 to 131,041 in the same period. The loss being confined to used cars.

The average financing per unit increased from $338 in July to $344 in August.

The number of new cars financed at retail during August increased to 46,395 as against 45,616 in July. The actual volume of money involved in the new car financing increased from $24,149,326 in July to $24,633,275 in August. The average financing per car rose from $527 in July to $531 in August.

The actual number of used cars financed at retail during August declined to 80,641 units from 82,687 in July. The amount of money involved in this financing dropped from $19,225,478 in July to $18,909,176 in August. The average per car increased from $233 in July to $234 in August.

There was an increase in the number of unclassified cars financed during August with the total going to 4,005 units as against 3,964 in July. The amount involved totaled $1,515,625 for August, against $1,342,103 in July. The average per unit rose from $339 in July to $378 in August.

The total volume of wholesale financing in August dropped to $22,113,678 from $26,016,028 in July.

FORD ALLOWED APPEAL RIGHTS IN JERSEY SUIT

Trenton, N. J., Oct. 3.—The Court of Errors and Appeals has permitted the Ford Motor Company to continue appeal from award of $30,000 to Israel H. Albert of Jersey City, for alleged failure to deliver rubber manufacturing machinery.

Albert obtained a judgment, sustained in the Supreme Court, alleging he purchased the machinery, paid for it but that delivery never was consummated. The company, Albert said, had alleged two court terms to pass without prosecuting an appeal and asked dismissal.

STUDEBAKER-ROCKNE EXPORTS UP 136% IN SEPT.; 10½% FOR '32

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was the seventh consecutive month in which cumulative total exports of Studebaker and Rockne cars have shown increases over corresponding periods in 1931.

"We are greatly encouraged by our third quarter record," he said, "since our percentage of increase for nine months show a substantial gain over the same figure for six months. Exports for the first half increased 6½ per cent. over the same period last year. For the nine months the increase amounted to 10½ per cent. The fact that our percentage of gain mounted as it did in the third quarter would indicate that we may expect still greater improvement over 1931 in the fourth quarter.

"If the trend continues, our business for the last quarter will exceed last year by a good margin, and further strengthen our position as fourth in the industry in total exports."

ANDERSON COMPANY NOT IN LIQUIDATION

Gary, Ind., Oct. 3.—Reports have been in circulation that the Anderson Company of this city is in process of liquidation in a bankruptcy proceeding. These reports arose from the fact that the company has been placed in a Federal receivership in equity, with John W. Anderson, president of the company, as receiver. Mr. Anderson has just issued a statement as follows:

This is not a bankruptcy proceeding and neither liquidation of nor interruption to the business of the company is contemplated.

It is a Federal receivership in equity—and the orders of the court are that the business—which is on a highly profitable basis—be continued without interruption of service to its customers.

No change is contemplated in the personnel which has been responsible for the high reputation of the Anderson Company for products of supreme quality and advanced design—for consistent and sound sales policy—and for effective sales promotional and other service to its customers.

Expressions of good will and assurances of continued support are being received from established ANCO customers and definite progress is being made toward successful culmination of important sales developments now well under way.

There is every indication that the business will emerge from the receivership in stronger financial position than ever before and with a substantial dominance of its markets well established.

E. J. MANGAN APPOINTED

Los Angeles, Oct. 3.—E. J. Mangan has been appointed general sales manager of the Up-Cyl-Oiler Company, 2815 South Hill St., by C. C. Bogardus, president of the company. The company is now in production on a new type of oiler for all types of valves. The factory force has been increased.

ILLINOIS TRUCK SALES IN SEPTEMBER 246 ABOVE AUGUST

(Continued from Page 1)

indicate that passenger car sales at the present are spreading into the higher price brackets with some of the leading high price units showing an actual gain in September over August.

FORD LEADING IN TRUCK SALES

Detroit, Oct. 3.—The Ford Motor Company now leads in sales of commercial cars and trucks throughout the United States for 1932 on the basis of complete reports just received for the eight months period ending August 31, a spokesman for the company said today.

This was accomplished despite the fact that deliveries of the new Ford commecial units did not begin in volume until June.

The official reports of registrations throughout the country show total Ford sales of 45,857, or 35.2 per cent. of the total of 130,376 units of all makes registered in the eight months period.

DE SOTO APPOINTS EVANS IN OMAHA

Detroit, Oct. 3.—L. G. Peed, general sales manager of the De Soto Motor Corporation, announces the appointment of R. Walter Evans as Omaha district manager. Mr. Evans succeeds A. J. Schaeffer, resigned.

Mr. Evans has devoted his entire business career to the atuomobile business and has had extensive experience in sales and distribution work. He comes to his Omaha post from the Chicago district.

MET. SECTION S. A. E. TO HOLD AIR MEETING

New York, Oct. 3.—Air-minded members of the Metropolitain Section, Society of Automotive Engineers, 29 W. 39th Street, will have their day this week with the Autogiro meeting scheduled for Thursday evening at the Hotel New Yorker. James G. Ray, vice-president of the Autogiro Company of America, Philadelphia, and there seems little reason to state what his topic will be.

Following the meeting Thursday evening the members will visit Newark Airport, Newark, N. J., on Saturday afternoon for a tour on inspection. They will be escorted through the airport by Lieut. R. Aldworth, manager.

FOREIGN FORD SALES REPORTED HOLDING FIRM

Brussels, Oct. 3.—It is estimated here that the Belgian Ford Company sold approximately 1,200 vehicles, most of them trucks, in the first six months of this year. In 1931 and 1930, Ford sold around 6,000 units each year. Slightly over 33 1-3 per cent. of these sales were passenger cars.

Ford sales for the second half of this year are expected to total about 2,500 units, of which at least 1,500 will be eight-cylinder passenger cars.

Paris, Oct. 3.—The new Ford V-8 cylinder model is meeting with success in France. The Ford factory here is turning out 1,000 cars a month, but this is insufficient to meet the demand.

MAX R. MILLER

Cincinnati, O., Oct. 3.—Max R. Miller, 43 years old, founder and president of the Pfaff Motor Car Company, died of a heart attack yesterday on his yacht on the Ohio River. Mr. Miller was born in East Millstone, N. J. He attended Peekskill, N. Y., Military Academy and New York University, graduating as chemist.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

SPARKS *from* DETROIT

Detroit S. A. E. Steps Up

* * *

Way Back When—

* * *

Work Helps Sales

* * *

W. R. Wilson

* * *

No Limited Age

* * *

Chris Sinsabaugh—Detroit Editor

MARKING time after he donned the toga of chairman of the Detroit Section of the Society of Automotive Engineers until now, E. V. Rippingille is set for the winter months, programs arranged, committees appointed and everything ready for a campaign of unusual activity.

The Detroit Section starts its operations next Monday with the usual dinner at the Book-Cadillac, followed by three different discussions, one on aerodynamics as applied to the present type of bodies by Herb Winters; another on aircraft engines applied to marine work by M. J. Steele, and a third on precision boring by William F. Wise.

* * *

SOMETHING DIFFERENT from the usual run is promised in the Steele session. Our engineers were greatly interested in the recent Harmsworth Trophy races so Gar Wood, who owns a film which has been shown only once, has loaned it to the Section for the evening. It shows Miss America X in action. In addition, Steele will give a brief description of the two boats, Miss America X and Miss England III.

* * *

THE RIPPINGILLE administration will go strong for student activities this winter, seeing as how it originated the idea two years ago. Harry Woolson and J. J. Caton are the committee, which plans six meetings, the first one set for October 25. The youngsters will gather in the Chrysler engineering department and listen to Fred Zeder, Chrysler's king pin engineer, who is greatly interested in this development.

The second session, no date set as yet, will be held at Packard, where they will be the guests of the Packard engineers. The third will be at the Book and will open the national winter meet of the society.

* * *

A. O. DUNK, who has the finest collection of photographs of the pioneers of this industry and of the early models, sends the column an interesting relic, an ancient newspaper clipping he unearthed in an old house at 3937 3d St., this city. The house was being remodeled and the clipping was found under the old wall paper.

What do you think it was? It was a scrap torn from an advertisement of Everitt-Metzger-Flanders, a company which created an unusual sensation with its E-M-F and which passed out of the picture when Studebaker took it over some twenty years ago. Remember the Studebaker-E-M-F? The company must have been going strong at the time the advertisement appeared, for it asks for a deposit of $100 with the order. Compare that situation with today's.

* * *

A VISITOR FROM PONTIAC, reciting the effect on the community following the Wilson company adding 300 men to its pay roll demonstrates the stimulus to the automobile business that followed. Inside of fifteen days, after the engine building concern had passed out these jobs, the dealers in Pontiac had sold 135 cars, new and old, none under $125 and three of them at $2,300, $1,800 and $1,700. Previous to this the market had been flat. Again proving that workmen must have automobile transportation and that the first thing they think of after getting re-employment is to buy cars.

* * *

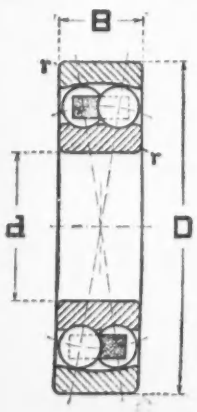
IT LOOKS AS IF the automobile industry has lost William Robert Wilson through his taking over the active management of Copeland Products, Inc. Wilson recently resigned as vice-president and general manager of Reo to devote his attention to Copeland, which he helped organize in 1925. Since leaving Reo he has been chairman of the board of Copeland.

Wilson certainly made his mark in the automobile business. He will be remembered as president of the reorganized Maxwell Motors Corporation and as a reorganizer of the Murray Body Corporation.

* * *

WALTER McLAIN of Hupmobile, just back from a vacation among the hills of West Virginia and eastern Kentucky, contributes the following upon his return:

"Rube Cole, our genial and hard working vice-president here at Hupmobile, is prone to comment on the fact that something like 7,000,000 motor vehicles now operating are more than four years of age. Hell, I saw cars running in the fringes of the Appalachians whose immediate paternal ancesters were towed along by mules. There just isn't any age limit in those parts."



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Retail Salesmen—This Is Your Page

This department is devoted to the interests of the retail sales division of the industry. Salesmen, this is your department. Automotive Daily News wants you to get something from this department that will help you in your work on the firing line. It wants you to pass on your own experiences, success, failures to help your brother salesmen. Send in your story in the form of a letter, or even a postal card, and let us get it ready for publication. Your achievement or your mistake may help another salesmen to make sales or avoid errors that cost you commissions.

Dealers read this page. Give us the benefit of your reactions on these problems that affect the work of your salesmen, the men on the firing line, the men who bring home the bacon or don't.

PLODDERS BEST SALESMEN

That the high-pressure salesman has no place in the present day system of automotive merchandising, but must give way to the salesman who knows automobiles and is willing to develop a sale rather than force one, is the belief of Dale Dietrich, vice-president and general manager of the San Antonio Motor Company of San Antonio, Texas, Hupmobile distributor. Elaborating upon his observations, Mr. Dietrich says:

"A few years ago it was the general belief among the automotive distributors that a man had to be a high pressure salesman in order to be a successful salesman. The past two years have, more than anything else, proven that this is far from right. The men who forced through sales in 1928 and 1529, making good salaries, are barely existing now, while those who plugged along, showing only a fair average from month to month, are the real money makers of today.

"In 1928 and 1929 we had a salesman in our employ who was earning close to $5,000 a year. He was what is known as a high-pressure salesman. If he ran onto a prospect who would be in the market in about sixty days for a new car, he brought all his energies to bear upon that prospect to sign him up then and there. As a result he made quite a number of sales. He was a good man for a period when selling was easy and pressure would get results.

"Today that man is no longer with us, and he is hardly making $100 a month with the firm by whom he is employed. High pressure methods are out, and he is lost when it comes to doing some real creative selling. His methods do not harmonize with the present-day methods of doing business. His plans do not get results as they did when people had more money and were easily talked into a sale. Then people bought; now they must be sold.

"The high-pressure salesman was not so much a salesman as he was a man with a bag of tricks. He had some little trick for every sale. First he would offer a price for the used car which he would lead the prospect to believe was an unusually attractive offer. Then he would throw fear into the prospect by suggesting that prices would probably go up within a short time, and every day that the sale was delayed endangered the prospect in buying at present prices.

"With business quiet, automotive owners have had more time to think. They have looked back, and realized that they might have secured more for their old car if they had inquired around a little before buying. They have looked back over the reductions and increases in the prices of automobiles and have discovered that the automotive manufacturer does not raise nor lower his prices promiscuously and that such changes are only made after every other plan has failed to bring about an adjustment.

"He has found that the car he has purchased has not proved just what the salesman said it was. He has found that possibly it was not just the car for him. All of these things have been turned over in his mind, and he has become cautious. He will not put much faith in the flagrant claims that sold him a few years ago. Now he is going to be sold on the car that he wants. It is he who holds the whip hand now.

"Into this period as come the salesman who is a plodder. He works hard every day. His sales will never be dramatic nor colorful, but they will be consistent and dependable. He is accustomed to being turned down. He is accustomed to working on prospects for several days or weeks before arousing any interest or enthusiasm. Because he lacks that forcefulness and overbearing that the high-pressure salesman used to make sales, he has resorted to the things that he thought would sell cars. He has made a thorough study of the car itself. He knows every bolt and screw. He can tell how many seconds it will take to go from a standstill to sixty miles per hour. He can tell all about the mechanical features and improvements. He can describe all the refinements that will appeal to women. He can define its value and superiority over other cars.

"These are the things in which motorists are interested at the present time. They are looking for values. They have become accustomed to shopping around, and in getting the greatest value for their money that can be had. The salesman who knows his merchandise is able to set forth the value of his car in such a manner that it will stand out as the dominating value in motordom in its respective price class. The high-pressure salesman has become so sold on aggressive methods that he is confused and lost when it comes to any other plan.

"The plodders of yesterday who were also-rans when the high-pressure boys were sitting pretty, are the men who are the producers today. They are accustomed to taking some time to make a sale, and because people are slower in giving up their money today, they can deal with them more intelligently. Many sales that have been made on impulse become repossessions on second thought, with unpleasantness and unsatisfactory results all around.

"We are looking for men who can work, and who are creative salesmen. We would rather have a small sales organization of men who could go out and sell, than of those who felt that force was required to take an order. The former are the men who get the best results in these times."

Dealer Activities

CHICAGO

In connection with a drive it is making for more members, the Chicago Automobile Trade Association has issued an interesting booklet, entitled "A Gibraltar of Strength to the Industry," wherein are listed the association's multitudinous activities and helps rendered to dealers. The keynote is that "C. A. T. A. membership is an investment; a protection against many evils; as essential as any insurance." Among the member benefits mentioned and discussed are such features as dealer service, legislation, employment, inclusion of Blue Book service in the cost of dues, special service securing business for members on wrecked motor vehicles through arrangement with 170 insurance companies, work among allied industries, and constructive efforts in behalf of the trade among finance companies.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

THEY BROUGHT IN CONTRACTS

For some time past Rockne Motors has had picked sales crews traveling around the country showing dealers and salesmen how to sell. These picked crews in the course of their work find many interesting instances of good selling, of ingenuity, of hard work and all the other attributes that go into making a successful dealer or a successful salesman. We are picking out some of these from the current issue of Rockne P-E-P, sales organ of the company, as follows:

Here is the demonstration program that won honorable mention for L. A. McKean Auto Company, Souix Falls, S. D., in the Rockne "Demonstration Pays" contest.

The L. A. McKean Company offered to pay anyone who would take a demonstration of one hour in a Rockne Six $2.50 if the person taking the demonstration bought another car delivering for less than $775 in Souix Falls on or before July 10, the closing date of the contest. This story was told in newspaper advertising, on handbills and on signs on both showroom windows and demonstrators used by Mr. McKean.

This dealer kept four demonstrators running in every city and village in his territory day and night. Between 800 and 1,200 people were given rides in the Rockne and 192 people were given actual bonafide demonstrations. One hundred fifty new prospects were added to his list and fifteen actual sales were made.

And here is one of a salesman who works all the time, systematically and earnestly, never passing up a chance to make a sale:

"One of Mr. Blank's salesmen does not make much of an impression at first. But he used the telephone and plans his canvasses in such a systematic way that he gets the orders. He has his wife and daughter using the phone all day long at home, and he either knew about or had contacted practically every name on our registration list.

"On Sunday morning our crew coupe was standing in front of the showroom and two young men passing by stopped to look at it. Two of the other salesmen had decided that the two young men should not even be approached. So they sat back talking among themselves and paid no further attention to the men looking at the car. The salesman I have mentioned, however, went out to the car and talked with the two boys. And, believe it or not, he not only sold a car to each of them, but made deliveries on both Rocknes that very day!"

After one of the picked crews had visited his establishment, Albert Kasey, sales manager of the Rockne division of Arthur R. Linburg, Inc., St. Louis, Mo., wrote the following:

"The sales promotion as conducted through your crew, which recently visited us, was so successful in inspring our salesmen that I am satisfied they will continue the good work. The results were very encouraging and the prospects that were secured and the sales that will result will more than pay for any and all expense incurred.

"The plan clearly shows that taking the showroom to the public's door is the only method that will bring results in this new era of selling.

"After seeing the results of this plan we have made it a definite rule that each salesman must make at least ten cold canvass telephone calls per day and must put out at least twenty pluggers per day. We have had more lookers, demonstrations and appraisals than at any other time, excluding the first few weeks after the announcement in January."

Used Car Selling Prices

Automotive Daily News in this department offers for the benefit of its dealer and salesmen readers a compilation of prices at which used cars have within the past few days been offered for sale by reputable dealers in various cities. These prices will vary on condition and from other causes. They are not presented as being the exact prices at which these models should be sold, but simply as the prices at which they have been offered for sale by dealers in the various cities. Other cities will appear in subsequent issues of this paper.

Detroit

	1931	1930	1929	1928
Auburn	595b-695d	395	....	....
Buick Standard	595-675	295-395	235cp-290	145-235
Buick Master	....	495	395cp	....
Chrysler 6	....	225-295	275	110-135
Chrysler 8	560	350	195r-325	165
Chevrolet	285c-395	165-275	110cp-175	65cp-95
De Soto 6	295	245	....	....
De Soto 8	....	285	....	....
Dodge 6	375	225b	125-190b	65
Dodge 8	260cp-645cpd	....	....	....
Essex	275c-350cp	125cp-245	75-95c	40-55c
Ford	184.50r-265	110r-225cp	75c-165	....
Graham 6	295	195	135-165	....
Hudson	445-495	225c-365	145-245r	65c-110
Hupmobile 6	325-595cp	265cp-300cp	....	195b
Hupmobile 8	495	....	325r-345	....
La Salle	975cp	795cpd	265-595	185d
Lincoln	1435	1350b	....	450cp
Marmon	....	....	150-175	145
Nash 6	....	395	195-250	45-125
Nash 8	445	....	....	....
Oakland	....	295	190cp-295	145
Oldsmobile	485-495cp	325cp-395	115c-195cp	75
Packard	....	685	....	265
Plymouth	....	145-185	....	....
Pontiac	340-350cp	145c-185cp	165c	65cp-75c
Reo	995	....	....	....
Studebaker Dictator	....	....	145	....
Studebaker Commander	....	295b	....	135-165
Studebaker President	595ccp	....	235	....
Willys-Overland	195-235	....	95	....
Willys-Knight	235	....	....	....

d-De luxe. c-Coach. cp-Coupe. ccp-Convertible coupe. b-Brougham. t-Touring. r-Roadster. Where no distinguishing mark follows the price the car offered is a sedan.

Birmingham, Ala.

	1931	1930	1929	1928
Buick Standard	650c	495	225c-235	85cp-150
Buick Master	745	495c	....	225
Chevrolet	375-395cp	195-325	150cp-175cp	50cp-95
Essex	....	135c	....	85c-125
Ford	260c-350	165c-300	100-175c	....
Franklin	....	....	595	....
Hupmobile 6	....	285	135	....
Lincoln	....	....	795	....
Nash 6	495	....	....	80cp-150
Oakland 6	....	....	225c	....
Packard	....	550	....	....
Plymouth	....	....	115cp	....
Pontiac	....	....	125c	....
Willys-Overland	....	....	....	75c

d-De luxe. c-Coach. cp-Coupe. ccp-Convertible coupe. b-Brougham. t-Touring. r-Roadster. Where no distinguishing mark follows the price the car offered is a sedan.

OPEN NEW BRANCH

St. Paul, Minn., Oct. 3.—Opening of a new and used car sales branch of Harold J. Slawik, Inc., at 1834 University Ave. has been announced. The business, which will be operated in addition to the firm's loop quarters, will be in charge of Perry LeClaire and Arthur Thoelke. The firm, Slawik, Inc., is Dodge dealer.

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Continental engineers constantly check up on Continental-powered equipment in the field. Furthermore, before Continental releases an engine from the factory, the purpose for which it is to be used is carefully analyzed and checked back upon the records of similar installations. Since Continental has produced more than 3,000,000 engines in the past 30 years, its sources of this practical information are almost inexhaustible. This practice of applying known facts to each individual problem plays a very large part in Continental's ability to supply engines that always give satisfactory, dependable and economical service.

• • •

Continental's laboratory engineering facilities and data are, without obligation, at the disposal of anyone seeking a solution of the power problems which are so important today. We invite you to write.

CONTINENTAL MOTORS CORPORATION

Offices: Detroit, Michigan, U. S. A.
Factories: Detroit and Muskegon

Continental Engines

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday, Monday and Holidays, and Tuesday When a Holiday Falls on Monday.

AUTOMOTIVE DAILY NEWS PUBLISHING CORPORATION
350 Hudson St., New York, N. Y.

O. J. Elder, President. H. A. Tarantous, Vice-President. Alexander Johnston, Secretary.
Entered as second-class matter August 27, 1925, at the post office at New York, N. Y., under the Act of March 3, 1879.
350 Hudson St., New York, N. Y. Telephone CA nal 6-1000.

MEMBER A. B. C.

Mail subscriptions to CIRCULATION DEPARTMENT 1926 Broadway.
Telephone TR afalgar 7-4500.

Subscription Rates: One year, $12.00; two years, $20.00 for United States and Canada, also Mexico, Cuba and Panama.

To Other Countries: One year, $15.00; two years, $26.00. Single copies 5 cents.

TUESDAY, OCTOBER 4, 1932

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Gain in Employment

WILLIAM GREEN, president of the American Federation of Labor, in a recent interview rightly finds encouragement in the fact that in August and September there was an increase in the employment of union labor. This is the first time that this phenomenon has occurred since 1929.

But Mr. Green qualifies his statement of encouragement by remarking that in spite of the gain the improvement has been so relatively small that it will mean little to the 11,500,000 people who are still without employment. This is undoubtedly true. We have got to make up our minds to face a difficult winter. Everything that humane people can do should be done to mitigate the hard fate of men and women who want to work to support themselves and cannot find employment.

Many companies are meeting the situation by spreading employment as far as possible, giving a share of whatever work they have to as many of their regular employees as they can use. Some companies are using the five-day and the four-day week, even for office forces. General Motors has just announced that its office staffs will go on a five-day week.

Wherever possible it is better to give work, by whatever expedient it has been created, than to offer charity. But where charity is needed it should and must be given. America never had a better chance to show its mettle than will be given it in the winter of 1932-1933.

Moving Out of the Back Seat

N. E. McDarby, vice-president in charge of sales for the Auburn Automobile Company, recently estimated that women comprise approximately 20 per cent. of all the motor vehicle drivers in the country. We should remember in considering this figure that it applies practically only to passenger cars. There are very few women truck drivers, bus drivers or taxicab operators. The chances are that women drive nearly 30 per cent. of the passenger cars in operation in this country.

The point that Mr. McDarby makes is that with women moving rapidly out of the back seat into the front compartment, the necessity for the manufacturer to win feminine acceptance of his wares is becoming more important every day.

If we mistake not, it was Ned Jordan who once remarked that, "If you sell the women you sell the car."

Mr. McDarby speaking again: "Women have learned to judge automobiles from the standpoint of the critical driver. Salesmen have found women to be more positive in their likes and dislikes than men. The first requirements any woman makes of a motor car are that it be smart in appearance and comfortable to ride in. But just as important to her is perfect performance in every power range, coupled with maximum ease of operation. Controls must be accessible without strain and light to the touch. There must be ample power for any emergency, lightning acceleration in traffic and plenty of speed on the straightaway."

If it was smart to recognize the influence of women on the purchase of motor cars ten years ago, it is just ordinary common sense for the manufacturer today to know that he has got to produce a car that completely pleases women.

Alfred Reeves, who has assumed charge of the national automobile shows at New York and Chicago, is working night and day to make the 1933 exhibitions the definite turning point in the automotive depression. Greater efforts at promoting the shows are being put forth, bigger trade assemblies are going to be assured. The shows are going to be "bigger and better than ever," to borrow from the circus patois.

Automotive Daily News urges all its readers to get behind this laudable campaign in any way open to the individual, by attendance if in no other way. Let's make the shows the beginning of real revival.

Sees Need for Industrial Conservation of Sulphur

While there is no danger of a sulphur famine in this generation, all major industries now using the product are striving to find a substitute or a different method of operation, it is reported by A. M. Taylor, consulting chemical engineer of New York, to the American Chemical Society, any of them have succeeded, he declares, the question of whether t ouse the alternate method or not depending on operating costs.

"The conservation of our sulphur resources is receiving intensive study," Mr. Taylor says, "but all processes studied or proposed are handicaped by a cost that precludes their competing with the brimstone recently made so easily available. If the cost of sulphur for our production of chemicals becomes exorbitant, then we must develop processes which will eliminate its use.

"From time immemorial sulphur has been the backlog of the chemical industry, and its rate of consumption has been considered the barometer of general trade activity. There is hardly an industry in the world into which it or one of its products does not enter.

"The world's sulphur resources have been estimated at from 56,000,000 to 121,000,000 metric tons, so that there is little immediate danger of any scarcity. The largest reserves are in Italy and the United States, conservatively estimated at 25,000,000 and 40,000,000 tons respectively. Chile is reported to have 5,500,000 tons averaging 70 to 90 per cent.; Spain 500,000 to 1,750,000 tons averaging 15 to 30 per cent.; and Japan several million tons of 50 per cent. ore.

"The producing deposits of Italy and Texas have the advantage of the lowest cost of production. If the estimate of 40,000,000 metric tons being the available resources of the United States is correct, then the supply will be exhausted in fifteen years, if our consumption and exportation continues at the present rate of 2,525,000 tons yearly. Even if our reserves were sufficient for fifty years, conservation of sulphur should receive our serious consideration if we are to continue to use it as a raw material in our basic industries.

"Of the sulphur produced in the United States, 86 per cent. of the total comes from the deposits of the Texas Gulf Sulphur, the Freeport Sulphur and the Duval Sulphur Companies located in Texas. No sulphur was produced in 1929 and 1930 in Nevada, California or Utah, which made small contributions during preceding years."

Brimstone comprised nearly 83 per cent. of the sulphur shipped to the consumer during 1928, '29 and '30, it is shown. Domestic and foreign pyrites, a combination of sulphur and iron, represented 13 per cent.

The shipment of sulphur direct to the consumer amounted in 1928 to 1,396,000 tons, in 1929 to 1,555,000 tons and in 1930 to 1,465,000 tons.

Mr. Taylor reviews the swing of industry from the production of sulphuric acid principally from brimstone to its production in high proportion from iron pyrites and back again. In 1882, he points out, brimstone furnished 85 per cent. of the acid produced, in 1895, only 75 per cent. But in 1914 almost 74 per cent. of American sulphuric acid production came from pyrites. A combination of factors again reversed the proportions after 1916, when the new contact process for the manufacture of sulphuric acid from brimstone replaced the chamber process, and at the same time, American supplies of pyrites were seriously curtailed by the World War.

"Our supplies of sulphur are adequate for this generation's requirements, but, unless more deposits of sulphur are discovered, we must expect higher costs of production and a new economic equilibrium between sulphur and pyrites.

"The current price of brimstone at Atlantic ports is $22 a ton; Spanish pyrites is 12 to 13 cents a unit, or the equivalent number of dollars per ton of sulphur. This pyrites price includes the cost of mining, handling and transportation from Spain to the Atlantic Seaboard, and has changed very little in the past thirty years.

"It would appear that there is a sufficient spread between these two prices to warrant increased use of pyrites; yet it must be remembered that for each ton of sulphur, two tons at least must be handled, together with the resulting iron oxide calcine weighing 70 per cent. of the ore.

"Today, with commercially pure domestic brimstone and the elimination of sulphuric acid mist formation, brimstone plants are constructed with practically no purification apparatus, power as steam is generated as a by-product in the cooling of the hot sulphur gas, installations are built with a capacity of 50 tons of sulphur instead of 12 to 15 as with pyrites, and these are almost automatically controlled. The price differential per ton sulphur, instead of $5, is now from $8 to $10, and we can see little likelihood of pyrites replacing brimstone even on the Atlantic Seaboard.

"Of the sulphuric acid produced, 41 per cent. is consumed in the fertilizer industry, 20 per cent. in oil refining, 10 per cent. in chemical manufacture and 10 per cent. in the iron and steel industry. The development of the hydrogenation process of petroleum refining is seen as a threat to the use of sulphur in that industry.

"Sulphuric acid may be the cheapest reagent for this work," he says, "but other methods of refining have already been developed which not only give the oil the desired characteristics, but yield side products of value. The hydrogenation process requires little sulphuric acid, but has the added advantage of eliminating the sulphur in the oil as hydrogen sulphide, which can easily be reclaimed."

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, Etc., required by the act of Congress of August 24, 1912, of Automotive Daily News, published daily except Sunday and Monday, at New York, N. Y., for October 1, 1932.

State of New York)
County of New York) ss.

Before me, a notary public, in and for the state and county aforesaid, personally appeared Harry A. Tarantous, who, having been duly sworn according to law, deposes and says that he is the business manager of the Automotive Daily News, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and address of the publisher, editor, managing editor and business manager are: Publisher, O. J. Elder, 420 Lexington Ave., New York city; editor, Alexander Johnston, 350 Hudson St., New York city; managing editor, none; business manager, Harry A. Tarantous, 350 Hudson St., New York city.

2. That the owner is: (If owner by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 per cent. or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) Automotive Daily News Publishing Corp., 1926 Broadway, New York, N. Y.; Macfadden Publications, Inc., 1926 Broadway, New York, N. Y.; stockholders in Macfadden Publications, Inc.; Bernarr Macfadden, 1926 Broadway, New York; O. J. Elder, 420 Lexington Ave., New York.

3. That the known bondholders, mortgages and other security holders owning or holding 1 per cent. or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.)

4. That the two paragraphs next above, giving the names of the owners, stockholders and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholders or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is 8,657. (This information is required from daily publications only.)

HARRY A. TARANTOUS,
Business Manager.

Sworn to and subscribed before me this 30th day of September, 1932.
[Seal] WESLEY F. PAPE,
Notay Public.

Nassau county. Certificate filed in New York county No. 90. Reg. No. 4 P 52. Commission expires March 30, 1934.

EMPIRE STATE DEALERS GATHER AT NIAGARA FALLS

(Continued from Page 1)

by D. C. Fenner, chairman of the Motor Vehicle Conference Committee. Leon F. Bannigan, editor of Motor World Wholesale, will direct attention to the service end of the automobile business in an address entitled, "Looking Around One Corner Where Business Is."

After the talks and discussions time will be taken out for the appointments of committees and other special announcements. The session will adjourn about 4 p. m., to permit members to prepare for the annual banquet, which will be held in the evening. James Dalton, editor of Motor, will speak at the banquet on "Slay the Dragon or Be Slain." James E. Green, humorist, will bring up that question, "Do We Want What We Need?"

AUSTIN PRODUCING 50 UNITS DAILY

Butler, Pa., Oct. 3.—The American Austin Car Company, Inc., is using about 300 employees to produce fifty bantam cars daily. The Austin is finding a ready sale in a number of Southern States, and shipments are being made as rapidly as the cars can be produced.

During the summer the Austin company equipped the plant for the making of bodies for the various models, and much expense in shipping costs has been obviated by the work of the body department.

All the cars leaving the factory bear the sticker, "½ cent a mile operating cost." The first shipment of Austin by boat was recently made to Southern ports by way of the Ohio and Mississippi rivers.

R. O. Gill, president and general manager of the company, envisions early expansion of production facilities if demand for the cars grows as it has in recent weeks.

ADDS PACKARD

Asheville, N. C., Oct. 3.—Oscar Brown of Brown Brothers, Hudson and Essex dealer of Asheville, has announced that they had taken over the Packard line of cars and will act as distributors for western North Carolina.

COMING EVENTS

OCTOBER

3- 7—**Buffalo, N. Y.** National Metal Congress. Sponsored by American Society for Steel Treating, with co-operation of American Society of Mechanical Engineers, Institute of Metals and Iron and Steel Divisions of American Institute of Mining and Metallurgical Engineers, American Welding Society, Wire Association.

3- 7—**Washington, D. C.** National Safety Council Meeting.

3- 7—**Buffalo, N. Y.** National Metal Exposition, 174th Regiment Armory, W. H. Eisenman, 7016 Euclid Ave., Cleveland, director.

3- 8—**Buffalo, N. Y.** National Iron and Steel Meeting.

4- 5—**Niagara Falls, N. Y.** Empire State Automobile Merchants Association, Inc., Convention.

4- 6—**Toronto.** Transportation Meeting, S. A. E., Royal York Hotel.

6-16—**Paris, France.** Passenger Car Show.

10-14—**Atlantic City, N. J.** American Gas Association.

13-22—**London, England.** Olympia Show.

17-22—**Atlantic City, N. J.** National Hardware Association, Accessories Branch.

NOVEMBER

11-19—**Glasgow, Scotland.** Motor Show.

14-16—**Atlanta, Ga.** National Tire Dealers' Association.

15-17—**Houston, Tex.** American Petroleum Institute Meeting.

18-Dec. 4—**Paris.** Aeronautical Show.

DECEMBER

2- 3—**Detroit.** National Standard Parts Association Convention.

3—**New Orleans, La.** Association of Asphalt Paving Technicologists.

5- 9—**New York.** Annual Meeting A. S. M. E.

5-10—**New York.** Power and Mechanical Engineering Exposition.

5-10—**Detroit.** Third Annual Joint Trade Show, National Standard Parts Association and Motor and Equipment Manufacturers' Association, Convention Hall.

JANUARY

7-14—**New York City.** National Automobile Show Grand Central Palace.

7-15—**Los Angeles, Cal.** Los Angeles Motor Car Dealers' Association, twentieth annual show.

16-28—**Detroit.** Highway and Building Congress.

28-Feb. 4—**Chicago.** National Automobile Show, Coliseum.

FEBRUARY

11-18—**Kansas City, Mo.** Kansas City Motor Car Dealers' Show.

27-Mar. 14—**New York City.** Chemical Exposition, Grand Central Palace.

APRIL

20-21—**Cleveland, O.** National Petroleum Association.

A DESIGN ENGINEER TAKES A PEEK AT MANUFACTURING

Buffalo, N. Y., Oct. 3.—At the technical session of the production meeting of the Society of Automotive Engineers, which convened here today at the Hotel Statler, Alex Taub, design engineer with the Chevrolet organization, read a paper on "How the Design Engineer Views Manufacturing." Mr. Taub's paper in an extended digest is presented herewith:

"That the production specialist's day is over, as has been said, is certainly not true. We believe that the need for production ingenuity is greater today than ever before. Engineering standards have gone up, perhaps because business is down.

"The engineer looks to the shop for major assistance in the realization of his improved ideals. He expects from the shop progress along two distinct lines:

"1. Voluntary reduction in variations.

"2. Increased mobility for change.

"By 1 is meant a reduction in variation from the mean specifications, such as usually is represented by tolerance, specified and otherwise.

"A group of troublemakers can be found in structural variations. These can best be illustrated by considering a crankcase and a cylinder block. The walls of these units vary in thickness approximately 3/64 inch. If this allowance is included in the specifications as a tolerance, it usually is all plus, which means weight, and somebody must pay for the iron. If this variation is not allowed for in the specifications, we must deal with a possible weakness. This weakness may produce resonance and roughness, and this is not in keeping with current engineering requirements.

"A structure like a crankcase is certain to incorporate critical locations which are supersensitive to metal variations. A good crankcase is carefully developed, or, we might say, calibrated as is a carburetor, to obtain the maximum structural effect for the minimum weight.

"To go through a crankcase with a fine-tooth comb is useless unless some assurance can be had from the shop that the dimensions can be held. When we bear in mind the fact that it is possible to effect a structural gain of 40 per cent. in a crankcase by an addition of 3 per cent. in weight, the importance of variation can readily be seen.

"These variations include those of the foundry and the machine shop. The machine shop can help by means of accurate location points and the rapid check-up of castings as they are received. This will avoid the piling up of unsatisfactory stock, which usually is absorbed in production.

"The characteristics of a power plant are largely controlled by the accuracy of the centers, roundness and straightness of cylinder and crankshaft and camshaft bores. Considerable progress has been made along these lines. However, if the most is to be made of every square inch of bearing area, more attention must be given to the variations at these places. Engineering decisions are based upon tests of various kinds, and, if the manufacturing variations are not discounted, trouble may follow. If the variations are large the effect of the investigation is lost.

"Another important variation that gives considerable field trouble is that from true concentricity of valve-stem guide and bosses with the valve seat throat. Eccentricity here results in poor valve life and generally an engine performance that is below par. I believe that opportunity exists for development of tools for machining these parts. Improvement in accuracy would be as far-reaching in its satisfaction, as eccentricity has been annoying in the field and to the engineer.

"Machinists in the shop appreciate quiet tappets, and, although concentric valve seats are not a cure-all for noise, the development of a good, quieting ramp on the camshaft is impossible if the valves are 'acting up' on their seats. Here is an opportunity for the machine-tool maker to point the way with new tools or methods for more concentric valve seats. This means quieter, smoother engines and maximum power for a longer operating period. It presents an outstanding opportunity for more result per dollar.

"Variations in the crankshaft are sources of concern to the engineer. The crankshaft is literally infested with tolerances to cover manufacturing variations and still more that are not listed. No doubt the specified variations are necesary today, but what improvement may we expect? Are you doing anything about straight journals on crankpins and main bearings? What about smoothness of finish, and what is being done to reduce the required tolerance on diameter? What is being done to narrow down variations here in crankpin index and radius?

"This last point is today the outstanding element in heavy corrections for out-of-balance conditions. Sometimes we note heavy grinding on cheeks that is all out of proportion to forging variation. This takes time and may weaken the shaft structurally and, because of the time involved, tends to create a shop demand for wide tolerance for balance. With proper co-operation between engineer and forge plant, arrangements can be made whereby the crankshaft forging will be ideal for balancing. However, no forging compensation can be made for position error in crankpins. This presents another opportunity for the machine-tool man to show what he can do.

"A better understanding of crank-

(Continued on Page 8)

YOUNGSTOWN STEEL PLANTS LOOK TO CAR MAKERS FOR GAINS

(Continued from page 1)

at around 50 per ecnt. of capacity and several idle sheet plants were scheduled to start this week, valley trade authorities report. Several other sheet plants which were expected to start on the fall bulge in sheet purchasing continue idle, however, and orders providing impetus to a real recovery in production of the flat-rolled steel manufacturers still are lacking. In the current week a slight increase in pipe output was reported, and finished steel production generally is said to be higher than in recent weeks, although the steel melting rate is unchanged from last week's.

A. P. I. PLANS WORKING MEETING IN TEXAS

(Continued from Page 1)

service and freight classification, production records and nomenclature, railroad and pipe line transportation, testing methods, specifications and standardization, refinery technology, used crankcase oil, well spacing, API district activities, fundamental research on occurrence and recovery of oil, and uniform laws.

These forty committees represent only about one-eighth of the more than three hundred committees that have been constituted to carry out the program of the institute in serving the oil industry.

GEORGIA TAX PLAN

Atlanta, Ga., Oct. 3.—Legislation to provide that buses and trucks pay taxes in each county through which they operate will be advocated by Gov.-elect Eugene Talmadge when he makes his first recommendations to the next General Assembly, it was announced here today.

ON THE OTHER HAND

EXTRAORDINARY ACTIVITY

Atlanta, Ga., Oct. 3.—Extraordinary activity in the garment making industry among Tennessee and Georgia factories was reported today by the W. E. Floding Company, local manufacturer of pants and uniforms. Mr. Floding said his own plant had added sixty-nine operatives during the past week and would add fifty more, stepping up next week's production to 450 dozen pairs of pants. Two-thirds of his 150 machines are now in operation, he said, and he was behind on orders.

He said that similar conditions prevailed in the factories in Tennessee and north Georgia, which he recently visited. At Winder and Stanton, Ga., factories were behind 2,000 and 1,000 dozen pants. To make the congestion worse, he added, the cotton mills are considerably behind in their orders.

OUTPUT BOOSTED 300%

New London, Conn., Oct. 3.—The Palmer Brothers Company, largest manufacturer of comfortables in the United States, has increased production 300 per cent. since August 1. The three plants are working on day and night schedules of production. This increase in business is not only seasonal, but shows a trend for both wholesale distributors and large department stores to stock merchandise looking forward to increasing sales.

SUGAR CONSUMPTION UP

New York, Oct. 3.—Sugar consumption in the United States during August amounted to 592,465 tons, compared with 591,482 tons in the like period last year. This is an increase of 983 tons, or 0.17 per cent., according to B. W. Dyer & Co., sugar economists and brokers.

SELLS 30 PLANES

Troy, O., Oct. 3.—The Waco Aircraft Co. has received an order from the Brazilian Government for twenty planes amounting to $250,000 for delivery in 30 days. The company has recalled many of its employees to speed up production. Waco sold fifteen planes to Brazil in July for around $200,000.

BRAKE DRUM BORING MACHINE

The Gisholt Machine Company, Madison, Wis., has developed a machine for roughing out a front wheel hub and brake drum from a single malleable iron casting. A fixed tailstock housing replaces the standard traversing platen table in this machine. This housing carries a boring spindle driven by a large diameter continuous cylindrical cam, together with the gearing to complete the feed mechanism.

A wrenchless chuck is operated by an air cylinder, which is mounted at the rear of the machine. The bore of the work spindle is thus left clear for the addition of the back boring attachment.

All tools traverse rapidly in their starting positions as soon as the machine is put in operation. The boring head carries twelve tools for roughing out 13 by $3\frac{3}{16}$-inch braking surfaces and six tools to cut out the inside taper roller bearing seat in the hub.

The back boring attachment carries a six-cutter boring head for the outside tapered roller bearing. The rear slide, mounted at a forty-five degree angle with the axis of the work, carries tools for chamfering the bore, facing and for turning the outside diameter. The machine carries a total of twenty-seven cutting tools and blades feeding in four different directions.

By the use of cemented carbide tools to allow higher cutting speeds, and multiple cutter boring heads to permit heavier feeds, these machines can turn out drums in one and a quarter minutes, it is claimed.

The operation of facing the wheel seat and finishing boring the bearing seats and the operation of finishing single point boring the braking surface concentric with the tapered roller bearing cups are carried out in one and a quarter and two and a half minutes respectively, in standard simplimatics.

JERSEY TAKES LEAD FOR UNIFORM TRAFFIC CODE IN THREE STATES

(Continued from Page 1)

regulations best suited to the entire metropolitan district without regard to state limits.

"There are today innumerable conflicts in the provisions of motor vehicle laws of the three states and inconsistencies in the local enforcement of these laws," he asserted.

Mr. Burgess declared there is a wide divergence in the operation of signal lights between New Jersey and New York. In New Jersey, he said, making turns on red lights is not allowed, while right turns on red always are permitted in New York and left turns are allowed under certain circumstances. New York has discontinued amber lights, he said, whereas New Jersey maintains them.

The utmost confusion is prevalent regarding stop street signs in New Jersey, he explained. Most of these signs have been outlawed, he said, and no motorist can be expected to tell when he should stop and when he should not.

"New York forbids motorists to cross streets intervening between streets at which there are control signals," his statement continued. "Neither Connecticut nor New Jersey has such a regulation. This results in the arrest of Connecticut and New Jersey motorists in New York and the blocking of traffic by New York motorists while driving in the other two states.

"Speed laws are not uniform. Local authorities take it upon themselves to fix the rates of speed they will permit. Local police in New York state stretch the 'in-town' speed limitations out in the country, trapping New Jersey and Connecticut motorists. A New Jersey driver was recently sent to jail for three days for driving at a forty-mile rate out in the country on a street that was classed as a 'residential' street by the local municipal authorities. New Jersey law limits speed in residential streets to twenty miles per hour. Few people—including public officials—ever drive so slowly except in traffic. Local conditions with which the visiting motorists cannot be acquainted govern enforcement. At best such enforcement is rarely more than occasional and those who are caught feel that they are victims of an unfair practice. Their respect for laws and law enforcement is lessened.

"Enforcement generally is so uneven the door is left wide open for fraud. Some municipalities place in their anual budgets an item to cover anticipated motor vehicle fines. This has been done in all three states. Then they send out their police to round up enough violators of laws, or of the local ordinances, to collect this revenue. Legal technicalities are violated. Strangers are caught in the dragnet and fined to suit the budget requirements. This situation has become so intolerable in parts of New Jersey the motor vehicle departments of New York and Connecticut have ceased to surrender their motorists on demand of New Jersey authorities for failures to appear in court, for other reasons, unless concerned in accidents."

The New York committee comprises Jacob H. Haffner, chairman; Thamos C. Desmond, Stanley P. Jadwin, J. Vipond Davies, Harrison S. Colburn, Robert E. Simon and Edward MacDougall. The New Jersey chamber will be represented by George W. Merck of West Orange, president of Merck & Co., Inc., of Rahway; Harry Green, president of the Motor Club of New Jersey, and John L. O'Toole, vice-president of Public Service Corporation.

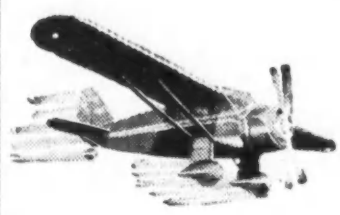
BLUE PRINTS MOUNTED WITHOUT WRINKLES

Many times it is desired to permanently mount blue prints on cardboard, beaver board or similar mountings. To avoid wrinkles on the blue print surface after it has dried on its mounting it has been found that by moistening the entire surface of the blue print before pasting it to the mounting, the print will dry smooth, eliminating the objectionable wrinkles.

Tool Tips.

You Can Fly A STINSON

and use it to increase business



Learning to fly is as easy as learning to drive a car; in fact easier in a Stinson, due to the extraordinary sturdiness, stability and simple maneuverability of the Stinson plane.

Once you own this clean, quick, comfortable means of transportation, you will use it continually—

To save time in contacting your own dealer organization.

To increase the number of prospective dealer calls.

To invite your owners and prospects in various towns to fly.

As a means of getting additional publicity.

AN ECONOMICAL SALES AID

Experience proves that a plane costs no more to operate than a fine car with a chauffeur. It gets you everywhere, much faster. After you learn to fly, the expense of a pilot can be eliminated, if you wish.

Write for further details

about the Stinson Cabin Plane, the Aircraft Standard of the World; and the story of how others are using planes to sell automobiles.

STINSON AIRCRAFT CORPORATION

WAYNE, MICHIGAN

STINSON

The Aircraft Standard of the World

NEW PASSENGER CAR REGISTRATIONS FOR FIRST

Make of Car	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Massachusetts	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska
Auburn Group	51	8	12	952	123	162	7	97	37	26	929	355	86	81	98	54	27	212	413	272	113	2	447	24	40
Auburn	51	8	12	928	120	161	7	93	36	25	903	336	84	78	96	53	26	210	408	268	111	2	438	22	40
Cord				24	3	1		4	1	1	26	19	2	3	2	1	1	2	5	4	2		9	2	
Chrysler Group	742	293	607	9914	1463	2873	307	1443	1293	249	10150	4838	2016	1403	1958	841	911	1931	6348	7395	3166	275	5539	521	961
Chrysler	146	23	76	1597	229	353	79	236	229	29	1508	542	237	154	297	88	91	307	836	989	519	36	560	75	150
De Soto	66	61	35	1897	85	397	36	91	101	29	1641	1021	184	181	231	96	60	266	519	1382	239	30	929	64	56
Dodge	93	68	166	1746	255	356	21	151	249	52	1585	726	447	254	349	250	152	297	918	1002	379	53	893	80	178
Plymouth	437	141	330	4674	894	1767	171	965	714	139	5416	2549	1148	814	1081	407	608	1061	4075	4022	2029	156	3157	302	577
Ford Group	1458	406	1730	12958	2098	2135	556	2525	2891	487	9200	4937	3722	2472	2728	2150	1318	2909	8711	17292	4634	1207	6209	805	2691
Ford	1453	402	1724	12710	2089	2101	546	2503	2872	486	9007	4892	3704	2463	2712	2135	1310	2898	8586	17096	4588	1202	6143	803	2676
Lincoln	5	4	6	248	9	34	10	22	19	1	193	45	18	9	16	15	8	11	125	196	46	5	66	2	15
Gen'l Mot. Group	2974	832	2729	18101	3598	6105	1355	4406	5419	777	21641	10118	7366	5277	4532	3721	3017	7152	17587	17679	9757	2427	15458	1672	4472
Buick	226	124	138	2769	498	906	183	381	438	68	2263	840	412	334	269	232	364	450	2453	1113	675	80	1118	152	300
Cadillac	18	8	6	442	26	128	24	31	48	3	458	69	26	30	20	46	28	53	209	329	55		108	4	13
Chevrolet	2485	607	2437	12217	2620	3650	906	3530	4415	638	14590	7407	5863	4181	3828	3141	1914	5745	10768	12066	7378	2254	12029	1249	3525
La Salle	6	3	4	274	18	84	12	23	20	1	286	34	17	8	6	8	27	31	221	158	44	1	83	1	10
Oldsmobile	41	40	20	888	92	324	62	55	150	22	1674	695	295	160	91	102	178	162	1241	1444	558	30	713	42	171
Pontiac	198	50	124	1511	344	933	168	386	348	45	2370	1073	753	564	318	192	506	711	2695	1969	1047	62	1407	224	453
Hudson Group	67	47	23	1207	271	560	59	326	158	40	1569	905	573	357	299	50	410	453	2312	2706	506	13	724	100	173
Essex	53	29	19	746	199	443	48	217	101	24	1116	617	411	222	243	33	315	333	1773	2003	332	9	552	59	110
Hudson	14	18	4	461	72	117	11	109	57	16	453	288	162	135	56	17	95	120	539	703	176	4	172	41	63
Studebaker Group	127	99	57	3879	331	652	73	159	384	47	2465	1136	437	317	389	206	337	480	1801	1294	720	101	816	106	275
Pierce-Arrow	1		1	170	18	39	3	13	18		181	23	4	21	9	6	10	28	175	70	18	1	99	4	4
Rockne	62	47	18	1483	113	241	37	56	151	22	663	440	207	133	201	104	163	193	611	607	268	50	249	30	132
Studebaker	64	52	38	2226	200	372	33	90	215	25	1621	673	226	163	179	96	164	259	1015	617	434	50	468	72	139
Willys-Ov'd Group	134	19	19	938	219	215	41	115	127	35	1546	779	475	334	311	76	126	256	629	578	597	51	907	84	349
Willys-Overland	123	14	17	580	197	185	39	104	115	26	1368	735	445	306	276	69	107	221	498	526	536	37	797	67	317
Willys-Knight	11	5	2	358	22	30	2	11	12	9	178	44	30	28	35	7	19	35	131	52	61	14	110	17	32
Non-Affil'd Mfrs.																									
De Vaux	2	3	1	257	23	8		6	4	8	89	30	31		8	12	7		15	79	4		26	9	6
Franklin	1	1	1	56	8	40	2	44	19	1	91	34	3	7	11	10	11	23	96	11	7	1	28	5	3
Graham	10	1	54	933	90	245	7	137	92	30	777	240	82	68	52	51	63	138	412	700	243	10	335	16	69
Hupmobile	42		18	516	33	107	12	59	113	3	617	174	57	55	75	35	25	99	429	821	186	23	260	9	43
Marmon	1			45	9	15	1	77	22		72	108	4	6	29	2	5	3	45	62	5		84	4	4
Nash	58	63	66	1154	159	360	61	82	126	49	1312	251	192	128	88	242	191	243	1412	385	291	86	501	81	93
Packard	29	13	8	573	50	239	37	62	71	1	701	118	67	23	66	40	78	145	515	374	148	6	177	7	28
Reo	15	1	11	210	21	80	1	28	20	7	184	46	31	17	34	12	27	46	181	279	66		108	12	24
Miscellaneous	4			340	45	14	20	330	70	9	211	58	24	17	17	35	5	56	118	73	42	2	106	24	10
State Totals	5715	1786	5336	52033	8541	13810	2539	9896	10846	1769	51554	24127	15166	10562	10695	7537	6558	14146	41024	50000	20487	4204	31725	3479	9241

NEW PASSENGER CAR REGISTRATIONS FOR FIRST

Make of Car	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Mass'setts	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska
Auburn Group	36	26	8	2888	209	523	29	224	80	43	2769	921	270	105	154	81	99	299	1342	995	376	3	665	51	97
Auburn	35	26	8	2819	193	514	29	205	72	40	2589	857	257	95	143	70	97	286	1310	954	362	2	622	47	89
Cord	1			69	16	9		19	8	3	180	64	13	10	11	11	2	13	32	41	14	1	43	4	8
Chrysler Group	583	382	915	10496	1392	3185	318	1456	1366	540	10882	5463	3467	1675	2717	1147	1307	1857	6548	9199	4465	407	4456	822	1804
Chrysler	157	65	185	2659	321	797	170	515	359	102	2662	1042	724	297	658	279	281	528	1824	1729	1091	149	863	228	388
De Soto	70	81	59	2205	82	695	23	99	130	85	1686	1204	250	159	250	193	109	207	446	1011	308	33	477	130	94
Dodge	140	123	333	3170	494	982	28	299	467	171	3526	1372	1114	603	798	401	372	415	2082	2376	830	116	1404	190	459
Plymouth	216	113	338	2462	495	711	97	543	410	182	3008	1845	1379	616	1011	274	545	707	2196	4083	2236	109	1712	274	863
Ford Group	4282	1492	2824	35250	4127	5864	1277	6912	7862	1457	27845	11662	10133	6006	6537	4714	3460	6530	22844	25429	9945	3021	13458	2047	6952
Ford	4278	1487	2821	34975	4114	5821	1270	6884	7838	1454	27545	11621	10101	5993	6515	4698	3450	6502	22681	25269	9904	3017	13391	2044	6933
Lincoln	4	5	3	275	13	43	7	28	24	3	300	41	32	13	22	16	10	28	163	160	41	4	67	3	19
Gen'l Mot. Group	5331	1773	3812	39749	6834	10907	1961	8592	9574	1960	41523	18806	18000	11356	9005	5864	5328	11401	27696	32167	18931	3935	24108	3111	10003
Buick	339	249	184	5865	877	1666	275	669	752	140	4270	1549	968	702	378	270	626	861	4060	3118	1217	164	1759	281	635
Cadillac	19	14	23	907	44	281	36	57	63	2	732	120	67	45	26	24	61	71	458	501	98	2	155	10	21
Chevrolet	4768	1315	3337	27653	5054	6376	1266	6837	7866	1634	26896	13444	13958	8964	7786	5054	3246	8689	16880	21150	14381	3577	18562	2345	8191
La Salle	16	7	22	411	35	162	28	29	38		554	76	45	25	24	22	51	55	474	213	67	4	108	13	11
Oldsmobile	38	97	56	1611	229	656	105	203	315	62	3696	1494	966	369	187	169	378	352	2073	3099	1148	38	1187	117	387
Pontiac	151	91	190	3302	595	1766	251	797	540	122	5375	2123	1996	1251	604	325	966	1373	3751	4086	2020	150	2337	345	758
Hudson Group	67	84	46	2363	540	1201	129	687	323	83	2927	1694	1244	891	630	213	1034	758	4484	3898	1146	60	1127	244	329
Essex	48	43	33	1289	321	802	89	423	191	44	2020	1199	824	554	476	131	764	539	3312	2744	740	37	837	143	218
Hudson	19	41	13	1074	219	399	40	264	132	39	907	495	420	337	154	82	270	219	1172	1154	406	23	290	101	111
Studebaker Group	142	112	64	4160	378	752	45	257	457	111	2910	1163	592	445	305	228	344	521	2001	927	872	126	953	158	491
Pierce-Arrow	2	3	2	315	33	114	5	27	42		261	37	6	13	17	23	10	48	320	40	50	2	131	6	5
Studebaker	140	109	62	3845	345	638	40	230	415	111	2649	1126	586	432	288	205	334	473	1681	887	822	124	822	152	486
Willys-Ov'd Group	244	54	111	2122	564	420	65	236	168	129	2326	1498	1476	690	749	120	330	435	1241	1492	1469	89	2004	228	799
Willys-Overland	232	47	104	1557	521	331	53	206	150	117	1933	1404	1392	624	673	99	291	366	926	1336	1328	77	1826	205	705
Willys-Knight	12	7	7	565	43	89	12	30	18	12	393	94	84	66	76	21	39	69	315	156	141	12	178	23	94
Non-Affili'd Mfrs.																									
*De Vaux	1	18		855	37	67	3	12	15	30	174	40	106	9	28	15	19	6	115	353	31		31	28	13
Franklin	2		1	201	9	89	8	54	27	6	168	34	11	14	8	14	30	47	243	10	13	1	41	15	8
Graham	27	6	84	1221	178	331	7	291	125	53	889	338	222	139	93	66	117	227	503	706	397	28	484	28	122
Hupmobile	48	37	15	954	77	306	11	113	200	9	1078	352	194	76	172	104	86	246	802	466	474	58	400	48	103
Marmon	34	5		160	57	88	2	81	35	1	329	304	49	62	92	39	32	29	157	194	44	4	268	32	28
Nash	85	128	100	2287	326	705	62	221	216	94	2330	537	480	307	145	332	380	434	2263	646	569	172	850	139	212
Packard	36	27	9	904	57	375	59	96	58	10	1141	157	118	51	70	46	95	173	740	458	264	11	236	7	53
Reo	13	5	15	398	44	121	2	71	28	21	325	105	73	67	58	15	51	71	310	333	131	3	129	40	29
Miscellaneous	12	15	24	1582	238	95	59	150	37	59	947	250	279	162	122	30	46	203	362	415	366	6	456	83	121
State Totals	1042	4164	8028	105590	15067	25029	4037	19453	20571	4606	98563	43324	36714	22055	20885	13028	12758	23237	71651	77688	39493	7924	49666	7081	21164

*Five months' report.

EIGHT MONTHS OF 1932 BY GROUPS AND STATES

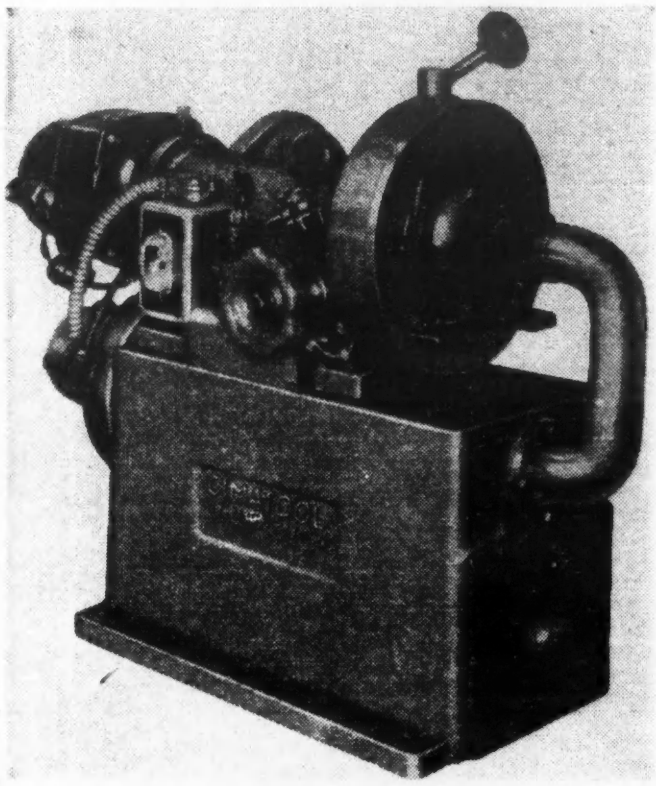
Make of Car	Nevada	N. Hampshire	New Jersey	New Mexico	New York	No. Carolina	North Dakota	Ohio	Oklahoma	Oregon	Pennsylvania	Rhode Island	So. Carolina	South Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	Dist. of Col.	Line Total	Group Total
Auburn Group	5	34	478	5	2028	90	5	758	69	33	878	70	32	8	64	167	28	44	94	86	81	229	13	264		10,191
Auburn	5	34	456	5	1915	90	5	741	69	33	861	70	31	8	64	165	27	44	88	81	76	227	12	261	9880	
Cord			22		113			17			17		1			2	1		6	5	5	2	1	3	311	
Chrysler Group	197	791	6957	200	24330	1418	372	10446	1683	874	15972	1470	536	539	1323	3152	228	485	1855	1756	1497	3221	340	1442		148,521
Chrysler	47	85	1189	31	3764	279	38	1199	227	153	2681	230	72	82	174	716	11	60	252	292	229	420	56	209	21882	
De Soto	21	95	860	12	3194	101	21	2175	207	137	2076	268	92	56	133	402	36	40	309	245	142	412	15	253	20999	
Dodge	28	76	869	48	2843	288	73	1282	440	133	2223	154	104	104	255	644	55	73	380	246	283	489	61	275	22146	
Plymouth	101	535	4039	109	14529	750	240	5790	809	451	8992	818	268	297	761	1390	126	312	914	973	843	1900	208	705	83494	
Ford Group	234	1004	6310	513	19366	3109	942	10971	2857	1241	13127	1056	1387	841	2069	8109	571	699	4375	2120	1682	4059	440	2282		187,593
Ford	228	991	6188	512	18838	3097	940	10844	2840	1222	12960	1044	1384	840	2059	8071	568	697	4361	2098	1670	4035	440	2233	185261	
Lincoln	6	13	122	1	528	12	2	127	17	19	167	12	3	1	10	38	3	2	14	22	12	24		49	2332	
Gen'l Mot. Group	483	1837	17787	833	52908	4866	1659	19380	6740	2111	30155	2579	2457	1499	3967	16756	998	1421	7869	3281	3283	9466	887	4864		376,258
Buick	100	234	2715	123	9172	269	107	1701	477	245	3784	370	149	97	227	1403	113	207	479	423	206	1005	124	444	41640	
Cadillac	11	10	366	7	1334	21	1	285	45	17	383	34	2	2	27	104	6	4	54	30	20	112	6	64	5127	
Chevrolet	319	1206	11266	634	32799	4057	1389	13624	5501	1587	20479	1643	2114	1150	3425	13928	745	907	6482	2202	2557	6730	643	3480	268310	
La Salle	5	7	196	2	529	18		143	20	9	316	39	6	5	21	65	4	7	19	20	15	58	1	18	2903	
Oldsmobile	15	120	1175	13	3522	117	58	1168	110	89	1648	98	39	125	95	222	50	86	122	244	110	535	46	295	19325	
Pontiac	33	260	2069	54	5552	384	104	2459	587	164	3545	395	147	120	172	1034	80	210	713	362	375	1026	67	563	38926	
Hudson Group	19	181	1340	18	4356	311	34	2017	122	104	2380	260	103	45	151	349	93	209	456	229	285	837	88	322		28,219
Essex	5	140	972	11	3232	225	24	1593	83	67	1746	209	72	32	120	244	64	165	342	135	222	618	74	257	20659	
Hudson	14	41	368	7	1124	86	10	424	39	37	634	51	31	13	31	105	29	44	114	94	63	219	14	65	7560	
Studebaker Group	51	205	2039	31	6604	169	92	1752	223	233	2725	253	59	148	268	885	77	126	299	509	238	861	64	404		35,003
Pierce-Arrow	1	3	222	1	466	7		52	20	8	146	37		1	10	48	1	5	17	8	4	38	2	24	2037	
Rockne	12	100	675	16	1410	87	57	746	77	78	967	115	35	72	118	378	31	75	113	210	133	280	20	94	12180	
Studebaker	38	102	1142	14	4728	75	35	954	126	147	1612	101	24	75	140	459	45	46	169	291	101	543	42	286	20786	
Willys-Ov'd Group	11	80	919	14	3333	122	159	1607	153	127	2550	138	31	74	181	342	17	147	250	191	294	785	28	109		20,622
Willys-Overland	11	70	624	11	2650	118	149	1388	144	88	2288	124	30	62	169	315	14	137	230	155	269	714	26	93	17665	
Willys-Knight		10	295	3	683	4	10	219	9	39	262	14	1	12	12	27	3	10	20	36	25	71	2	16	2957	
Non-Affil'd Mfrs.																										
DeVaux	2	3	42		89	15	4	63	7	15	95	5		11	14	20	9	2	3	23	10	64	2	2	1128	
Franklin	2	15	68		324	1		97	7	10	172	31	1		7	29	3	1	10	29	4	6		14	1345	
Graham	11	71	449	5	1577	20	13	638	32	118	964	80	10	24	79	240	53	44	146	135	122	265	13	146	10110	
Hupmobile	3	16	410		1330	23	12	705	46	10	1672	69	41	31	68	142	20	35	142	60	44	244	19	124	9077	
Marmon		5	63	2	289	2	2	55	3	2	128	2	1		2	7	2		11	2	5	7		5	1198	
Nash	18	175	989	15	3549	34	43	857	77	179	1623	142	15	35	103	200	58	72	166	274	118	723	40	272	17451	
Packard	19	32	627	7	1908	33	2	446	76	33	826	60	14	5	46	117	24	37	95	73	63	154	5	181	8459	
Reo	2	16	141	2	586	5	2	176	18	21	283	32	5	2	15	81	4	6	20	49	33	51	4	12	3027	
Miscellaneous	1	4	159	8	370	85	6	134	18	22	208	30	10	10	5	31	5	4	34	65	17	128	3	10	2997	
State Totals	1058	4469	38778	1653	122947	10303	3347	50102	12131	5133	73758	6277	4702	3272	8362	30627	2190	3332	15825	8882	7776	21100	1946	10453	861199	

EIGHT MONTHS OF 1931 BY GROUPS AND STATES

Make of Car	Nevada	N. Hampshire	New Jersey	New Mexico	New York	No. Carolina	No. Dakota	Ohio	Oklahoma	Oregon	Penn'vania	Rhode Island	So. Carolina	So. Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	Dist. of Col.	Line Total	Group Total
Auburn Group	34	73	1642	3	5187	148	27	1980	93	125	2395	265	49	27	128	159	47	77	153	194	221	694	15	274		26,303
Auburn	30	73	1592	3	4969	142	26	1904	86	116	2330	259	46	25	127	134	45	76	145	179	211	659	14	265	25177	
Cord	4		50		218	6	1	76	7	9	65	6	3	2	1	25	2	1	8	15	10	35	1	9	1126	
Chrysler Group	281	745	6318	298	21629	2036	546	10641	1731	1205	15847	1627	907	1025	1428	5127	358	712	2374	2280	2055	4226	433	1589		162,267
Chrysler	115	174	2405	77	7514	596	125	2459	348	316	4631	483	243	218	243	1306	80	172	584	515	489	935	103	362	42566	
De Soto	31	81	698	19	2981	149	21	1902	92	226	2105	385	153	95	153	772	56	59	392	457	170	532	12	271	21898	
Dodge	68	162	1717	118	4795	609	165	2168	832	299	3910	385	223	330	509	1558	163	178	709	468	613	1374	171	517	44306	
Plymouth	67	328	1498	84	6339	682	235	4112	459	364	5201	374	288	382	523	1491	59	303	689	840	783	1385	147	439	53497	
Ford Group	591	2422	16512	966	46522	8186	1886	24576	5765	3616	27193	2701	4212	2204	6174	18641	1448	1383	10155	5029	4335	9133	911	6265		442,756
Ford	586	2407	16376	962	45850	8176	1878	24443	5746	3599	26983	2677	4209	2202	6151	18597	1443	1380	10137	5014	4322	9099	910	6232	439985	
Lincoln	5	15	136	4	672	10	8	133	19	17	210	24	3	2	23	44	5	3	18	15	13	34	1	33	2771	
Gen'l Mot. Group	713	3375	29689	1512	79162	9027	3163	36059	10032	5004	49644	4520	5476	3823	8575	26939	2086	2059	13155	6722	6093	17704	1497	7452		665,208
Buick	85	359	4354	240	12554	569	181	2674	801	475	5985	653	282	228	466	2335	198	302	789	841	364	1617	157	694	69077	
Cadillac	10	31	627	11	2058	38	3	403	82	37	700	72	9	2	39	164	22	18	55	51	38	140	8	78	8533	
Chevrolet	552	2189	18552	1137	48434	7417	2538	24825	8098	3840	33208	2850	4728	2932	7395	22382	1624	1264	10609	4554	4511	12233	1161	5285	471547	
La Salle	10	22	368	4	1086	26	2	226	30	22	538	76	15	1	31	107	9	24	27	23	29	94	2	54	5316	
Oldsmobile	22	288	2409	49	6200	282	105	2831	178	222	3553	138	117	392	277	475	74	161	333	525	287	1210	83	534	39777	
Pontiac	34	486	3379	71	8830	695	334	5100	843	408	5660	731	325	268	367	1476	159	290	1342	728	864	2410	86	807	70958	
Hudson Group	66	416	2573	27	7356	633	89	3420	221	231	4707	458	247	160	325	691	221	420	871	435	456	1570	164	394		52353
Essex	42	298	1715	9	5170	436	56	2519	117	129	3392	349	159	109	246	432	132	296	625	288	327	1105	125	296	36193	
Hudson	24	118	858	18	2186	197	33	901	104	102	1315	109	88	51	79	259	89	124	246	147	129	465	39	98	16160	
Studebaker Group	77	182	2389	47	6529	159	119	2044	262	339	2998	340	94	176	375	1255	111	86	387	654	213	1076	70	437		38933
Pierce-Arrow	1	11	345	4	740	13		179	40	25	306	66	4	1	20	118	3	9	34	27	8	72	1	40	3579	
Studebaker	76	171	2044	43	5789	146	119	1865	222	314	2692	274	90	175	355	1137	108	77	353	627	205	1004	69	397	35354	
Willys-Ov'd Gr'p	17	252	1534	72	5848	237	341	3860	281	152	3745	228	55	285	321	777	79	231	381	576	669	1213	60	202		40475
Willys-Overland	13	222	1014	60	4458	221	321	3202	231	115	3107	179	51	269	297	677	67	215	347	455	615	1087	51	143	33920	
Willys-Knight	4	30	520	12	1390	16	20	658	50	37	638	49	4	16	24	100	12	16	34	121	54	126	9	59	6555	
Non-Affili'd Mfrs.																										
*De Vaux	9	16	209	1	275	33	15	96	3	65	257	6	13	35	26	7	39	3	3	65	34	177	4	1	3398	
Franklin	3	28	194	3	601	12		177	26	38	371	41	3		18	51	12	5	5	35	12	30	2	28	2749	
Graham	20	68	593	9	2001	98	50	822	81	237	1568	118	24	39	120	429	111	31	146	200	209	378	10	204	14248	
Hupmobile	15	71	785	1	2299	41	21	869	52	42	1424	128	81	80	129	336	52	77	258	255	103	236	37	224	14045	
Marmon	5	18	218	7	570	15	19	460	16	27	549	7	2	6	12	108	11	3	67	20	45	100	3	52	4466	
Nash	19	254	2286	43	6036	101	94	1610	148	241	2793	281	46	94	162	567	132	158	236	228	223	1437	80	310	31599	
Packard	14	58	859	5	2449	51		592	102	58	1171	78	25	19	63	213	21	41	140	89	81	198	4	216	11798	
Reo	4	24	277	6	847	14	14	280	34	52	317	120	15	7	29	186	20	16	34	88	56	107	11	21	5037	
Miscellaneous	14	41	545	38	1086	75	36	832	112	206	930	70	37	77	67	313	43	19	102	264	55	242	6	164	11493	
State Totals	1882	8043	66623	3038	188397	20866	6420	88318	18959	11638	115909	10988	11286	8057	17952	55799	4791	5321	28467	17134	14860	38521	3307	17833	1527128	

Production--Engineering--Factory

Bench Type Diamond Boring Machine



The City Machine and Tool Works, Dayton, O., has recently completed development of a line of diamond boring machines made in three types to meet a wide range of applications. The machine illustrated herewith is a bench type machine, adapted for such boring operations as the bronze or babbitt bushings in end frames of small electrical motors, for the boring of wrist pin bearings in small refrigerator pistons, for the boring of all types of small bushings, and for many similar operations. Holes up to ¾ inch in diameter can be bored on this machine.

This is a semi-automatic machine in that the operator places a piece of work in position and starts the machine, after which the cycle is automatic, the machine stopping after the bore has been completed. It must be borne in mind that this is a production machine and is specially tooled for the particular job on which it is to be used. The illustration shows a machine equipped for boring the bronze bushing in a motor end frame. In this case the machine is equipped with a magnetic chuck and the operation is as follows: The work is put in position on the chuck and one of the two electric switches is pulled forward to energize the chuck and hold the work in place. The operator then pushes the exhaust tube against the end of the work, so that borings may be carried away by a special exhaust system. In this connection it should be noted that if desired a cooling system may be applied to this type of machine.

Next the operator closes the second electric switch, thereby starting the machine on its cycle of automatically controlled operations. Attention is called to the fact that current for the driving motor is by-passed through the magnetic chuck in such a way that the starting switch is inoperative unless the chuck is energized and holding the work securely in place. With both switches closed the spindle starts rotating and feeding the boring tool through the hole to be finished. The spindle is fed forward against the tension of a spring and after the bore has been completed an automatic trip opens the switches, thereby cutting off current from the driving motor. Simultaneously an electrically operated friction brake instantly stops rotation of the spindle and the clutch controlling the spindle feed is also released, so that the spring may withdraw the spindle to the starting position. As the spindle has stopped rotating before its return motion starts, there is no tendency for the tool to produce a spiral scratch in the finished bore.

ENGINEERING DATA ON HYPOID GEARS

The Gleason Works, Rochester, N. Y., now has ready for distribution an elaborate book containing engineering data on large hypoid gears and spiral bevel gears. The booklet is elaborately illustrated and contains formulas and tables completely to cover the subject of which it treats.

In the book will be found complete information on the design, application, efficiency, speeds and horsepower transmission of these two types of bevel gears, besides standard specifications from which the engineer can select gears suitable for installation and the purchasing agent can select the prices of the gears in various quantities.

Appraiser's Manual

Mathew J. Dailey & Co., Boston, Mass., is putting out a new edition of its Automobile Adjuster's and Appraiser's Manual, which is designed to eliminate guess work from the details of appraising car values, the cost of parts replacement, identification specifications and the many other intricate factors composing the essentials of information necessary to insurance company adjusters, investigators and agents; attorneys, passenger bus and express companies, new and used car dealers and garage men.

Make by make, model by model and part by part, this book lists every item of automobile mechanism or structure that might be damaged by fire, theft or collision on all models from 1929 on. (The only exception is in a few rare cases where some manufacturers produced limited special custom jobs. Information on these may be had upon request by letter.) Every car of commercial production standing is included in this compilation.

In addition to the price of parts, the fair cost of labor necessary to replace each part is given. Where changes in construction have been made during the past four years that involve changes in the labor required for mechanical replacement, these changes are figured in the costs given.

THE METAPUMP

The Universal Merit Corporation, Cleveland, O., is putting out a device known as the Metapump. This pump is a dispenser for gear lubricant, measuring pints and fractions of pints with accuracy, it is stated.

This pump operates on the positive displacement principle. A down stroke of the piston fills the cylinder with an accurately measured pint of lubricant. The up stroke delivers it through the hose, and indicates exactly the quantity supplied.

The pump is designed to insure against possibility of fraud. The indication is automatic, and the meter works in unison with the pump. The scale of the metering device is divided to indicate ¼, ½, ¾ and a full pint. A totalizer indicates delivery up to five points. No priming is necessary. Push-back can be used only to return totalizing counter to zero. It cannot advance the count, and counter does not operate until the full stroke is completed.

Expansible oversize aluminum pistons are designed to prevent by-passing of lubricant . . . Nationally adopted specifications permit a tolerance of ⅝ liquid ounce, plus or minus. In the delivery of one pint the Metapump in official tests showed an accuracy of ⅛ to ¼ ounce with eight different types and brands of standard gear greases, it is claimed.

The Merit Metapump is furnished with automatic locking device which notifies the operator when container is empty. Makes it necessary to refill to operate again. This is one of the main requirements of the Bureau of Weights and Measures.

Scratch Extensometer

The Baldwin-Southwark Corporation, Philadelphia, is placing on the market a scratch extensometer which is about the size of a teaspoon and weighs less than an ounce. The device may be attached to light as well as heavy structures.

The extensometer is designed to record tension compression strain and also when tension compression strain is present will record sheer strain. It may also be adapted to record sheer strain alone.

A diamond is mounted so as to be under a small but adjustable pad. The diamond bears on a target of specially heat-treated steel. Strain in the member under test causes the diamond to scratch a record on the target. At the same time the target is under a resultant force, varied manually, which causes it to move at right angles to both the axis of the instrument and to the axis of the diamond. In this way one coordinate of the record indicates the strain, while the other has no meaning, but gives a measure of the variability of the resultant transverse force and the amount and rate of strain variation. There is no motion in the target when there is no change of strain. Strains are read from the record by filer microscopes, which may be of the moving eyepiece or of the moving table type. The record may also be photographed microscopically and the resulting print be measured directly.

An advantage claimed for the scratch extensometer is that no multiplying system is needed on each instrument. Targets may be filed away for future reference.

VISE CATALOG

The Rock Island Manufacturing Company has just published a catalog covering its line of vises. The vises covered in this catalog include machinists', heavy chipping, combination pipe, woodworkers vises, combination of anvil and vise and the new line of home and garage vises, recently noted in Automotive Daily News. The extra heavy hinged pipe vise is described.

The catalog is completely illustrated with detailed descriptions of the various items in the company's line.

A DESIGN ENGINEER TAKES A PEEK AT MANUFACTURING

(Continued from Page 4)

shaft balance is required. Today crankshafts are being held to ½-inch-ounce out of balance, which is very good, but the important point is, where is the out of balance? The shaft, though checking to ½-inch-ounce out of balance, may actually be twenty-four times this much under operation if consideration is not given to the position of the out of balance and a couple is permitted to exist. Increased tolerance for out of balance is preferred to incorrect position.

"The engineer and the forge shop can collaborate to the extent that all forgings shall be heavy in the desired plane. This would still mean nothing if crankpin-position error is permitted. Very little position error of the pins can create considerable out-of-balance effect.

"Reciprocating parts of an engine are respected by both the shop and the engineer, but, like the crankshaft, they are smothered in tolerances, with resulting weight variations. Selective assembly is the present way out."

Mr. Taub then remarks that "we would go through every piece of the car and raise questions as to what is being done to reduce tolerances." He then cites the need for mobility in making changes. "To change with the trend is second in importance to creating the trend," he remarks, and then continues: "To do either we must be able to make changes without the tremendous expense of the immediate past."

After considering this need for ability to make change, Mr. Taub remarks: "The mental attitude of the men in the shop to change machining methods to facilitate changes in the product is worthy of mention. Suppose it become necessary to increase the rigidity of a crank shaft, which may require cheeking. Considerable protest arises in a shop that is not cheeking the crank shaft, which is a difficult and unsatisfactory operation. Why? Probably because suitable tools are not available or the sequence of operation would be disturbed. The shop is entitled to its 'rathers,' but shop habits also must undergo development in mobility to change.

"Good engineering ideas or principles often are doomed because the designs cannot be made economically if at all. But this is the day of new ideas; if competition is the life of trade, new ideas are the life blood of competition.

"The suggestion has been made that the engineer call in the machine-tool specialist to collaborate on designs while they are still liquid. This might lead to the successful production of an item heretofore regarded as beyond redemption.

"What would our associates in the production department do if the engineer told them how to do their job or where they should buy machine tools? Yet new ideas must be given consideration even when apparently impractical from the producing standpoint. The outside specialist, with his incentive for new tool sales, should be brought into consultation, but by the shop. Rather than discard a new item, the shop should pass the problem of its fabrication out among the various tool companies in which it has confidence. Thus, casting the bread of our ideas upon the waters of machine-tool genii may result in a return other than just wet bread.

"We ask for a voluntary decrease in variations and improved mobility to change. These must not be conflicting requirements. One without the other would be insufficient. Appreciation of each of these elements exists today. However, they need more consideration, particularly when appropriations for new or changed products are in the offing. If new investments are in order, let us give consideration to these principles. Who knows but that the promotion of these very principles may help the appropriation along.

"The fact has become increasingly evident that intimate contact between the shop and the engineering department is needed to build the proper appreciation of each other's problem. It is essential that the engineer shall know his shop and shop man, so as to temper his suggestions to prevailing conditions. It is just as vital that the shop man be intimate with engineering test results, so that he can see the parts he is producing in the light of their functioning. Test results, or even seeing tests conducted, may influence valuable suggestions as to improved design that will be easily produced good."

RING DRILLING FIXTURE

The Reed Prentice Corporation, Worcester, Mass., has developed a universal ring drilling fixture designed for drilling holes in the outside diameters of adjusting collars and similar jobs.

The capacity of this fixture is 1¼ inch diameter as a minimum and six inches as a maximum. It is possible to drill holes in the center of the six inch width of maximum sized rings. Holes from ⅛ to ⅝ of an inch can be drilled with this fixture.

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